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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,818	12/01/2003	Robert Beach	022.0118C1 (612A)	3623
80558 7590 12/30/2009 INGRASSIA FISHER & LORENZ, P.C. (Symbol) 7010 E. COCHISE ROAD SCOTTSDALE, AZ 85253-1406				
EXAMINER AGA, SORI A				
ART UNIT 2476		PAPER NUMBER		
NOTIFICATION DATE 12/30/2009		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@ifllaw.com

Office Action Summary

Application No.

10/725,818

Applicant(s)

BEACH ET AL.

Examiner

SORI A. AGA

Art Unit

2476

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,8-12 and 24-26 is/are pending in the application.
- 4a) Of the above claim(s) 26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,8-12 and 24-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-06)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(c), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(c) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/09/2009 has been entered. Applicant has amended claim 1 and added claims 24-26. Claims 3-7 and 13-23 had been previously cancelled. Claims 1, 2, 8-12 and 24-26 are currently pending.

2. As a result of applicant's amendment, the objection to claim 1 is withdrawn.

Election/Restrictions

3. Newly submitted claim 26 is directed to an invention that is independent or distinct from the invention originally claimed and for the following reasons:

- I. Claims 1,2,8-12 and 24-25 are drawn to switching a message that includes a header, classified in class 370, subclass 389.
- II. Claim 26 is drawn to power supply, classified in class 455, subclass 572.

(Please refer to office action mailed 08/15/2007).

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 26 withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1,2, 8-12, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feder et al. (US 2002/0089958 A1) (herein after Feder) in view of Vook et al (US 5509027) (herein after Vook).

Regarding claim 1, Feder teaches in a wireless data communications system wherein data communications are provided between mobile units and a central computer via access points [see paragraph 0078 lines 1-7 where air links from end system (mobile units) are used to connect to an MSC (central computer) via at least one base station (access points) and a wireless hub and one backhaul network], in accordance with a wireless communication standard protocol [see paragraph 0054 lines 7-9 and paragraph 01113] and wherein the mobile units associate with the access points for purposes of data communications in accordance with the wireless communication standard protocol [see paragraph 0129 lines 1-5 where end systems (mobile units) register (associate) for service on the network using a foreign agent FA in the base station. See also paragraph 0326 lines 4-7],

the improvement wherein at least some of said access points are connected to said central computer through at least one data switching hub [see **paragraph 0078 lines 1-7 where air links from end system (mobile units) are used to connect to an MSC (central computer) via at least one base station (access points) and a wireless hub**], wherein said data switching hub maintains a list of the access points and their associated mobile units generated during association [see **0313 lines 1-16 where registration (association) sets up three tables including 'tables 1 and 2' – shown in paragraphs 0313-0315. See also table 2 where the list associates a list of access points AP1-AP2 and corresponding wireless modem id (associated mobile units)**], and wherein said data switching hub provides the functionality of the wireless communications standard protocol that selectively sends data communications to access points connected to said hub in accordance with destination address data in said communications [see **paragraph 0097 lines 1-9 and paragraph 0098 where a foreign agent present in the wireless hub relays frames from the access points to the MSC (central computer) and vice versa using ARP, UDP/IP (protocols)**], wherein at least some of the access points each provides a conduit for data communication to the mobile units independently of the destination address data in said communications that identify a mobile unit [see **paragraph 0066 lines 1-6 where the Access Points receive PPP down link frames and forward them to the end system (mobile unit)**].

However, Feder does not explicitly teach the mobile units monitor polling signals from the access points. However, Vook teaches a destination device (mobile units) monitors all

broadcast beacons (polling signals) in order to receive all broadcast packets [see column 18 lines 25-29]. It would have been obvious for a person having ordinary skill in the art to enable Feder's end system (mobile units) in order to allow them receive all the broadcast packets disclosed in Feder.

Regarding claim 2, Feder teaches the improvement specified in claim 1 wherein said data switching hub is arranged to monitor source address data in communications received from each access point connected to a port of said data switching hub [see paragraph 0326 lines 3-8 where an AP forwards a request from an end system and the wireless hub recognizes the registration request], wherein said switching hub is arranged to maintain a routing list correlating said source address data with said port of said data switching hub and wherein said switching hub is arranged to use said list to selectively provide said data communications to said access points [see 0313-0315 lines 1-16 where tables including 'tables 1 and 2' that are used for handoff (selectively routing) are shown and where the list associates a list of access points AP1-AP2 and corresponding wireless modem id (associated mobile units). See also paragraph 0080 where the Access Point is simply a port].

Regarding claim 8, Feder teaches a method for providing data communications between mobile units and a central computer comprising [see paragraph 0078 lines 1-7 where air links from end system (mobile units) are used to connect to an MSC (central computer) via at least one base station (access points) and a wireless hub and one

backhaul network]: connecting said central computer to at least one switching hub over a wired data communications network [see **paragraph 0114 lines 1-3 where the wireless hub bridges a trunk to the remote APs and the backhaul line (eg. T1 and T3) to the network's MSC (central computer)**], wherein the switching hub provides the functionality of a wireless communications standard protocol that selectively sends data communications to access points [see **paragraph 0097 lines 1-9 and paragraph 0098 where a foreign agent present in the wireless hub relays frames from the access points to the MSC (central computer) and vice versa using ARP, UDP/IP (protocols)**]; connecting a plurality of access points to ports of said switching hub [See **paragraph 0080 lines 10-13 where the Access Point is a port into the wireless hub**]; associating mobile units with selected ones of said access points in accordance with polling signals as specified by the wireless communications protocol [see **paragraph 0129 lines 1-5 where end systems (mobile units) register (associate) for service on the network using a foreign agent FA in the base station. See also paragraph 0326 lines 4-7**]; providing data communications packets on said wireless communications network, said packets including destination addresses each identifying a mobile unit [see **paragraph 0078 lines 1-7 where air links from end system (mobile units) are used to connect to an MSC (central computer) via at least one base station (access points) and a wireless hub and one backhaul network. See also table-4 in paragraph 0320 where the transmitted Ethernet frame includes MAC user end system (mobile unit) as Destination Address**];

maintaining a routing list at said switching hub relating said ports to said access points and to said mobile units associated with said access points wherein the routing list is determined during association of the mobile units to the access points [see 0313 lines 1-16 where registration (association) sets up three tables including 'tables 1 and 2' – shown in paragraphs 0313-0315. See also table 2 where the list associates a list of access points AP1-AP2 and corresponding wireless modem id (associated mobile units)];

operating said switching hub to relay data communications packets from said wired data communications network to said access points in accordance with said routing list and in accordance with the wireless communication standard protocol [see paragraph 0097 lines 1-9 and paragraph 0098 where a foreign agent present in the wireless hub relays frames from the access points to the MSC (central computer) and vice versa using ARP, UDP/IP (protocols)]; and

relaying data communications received from said switching hub by said access points to associated mobile units by radio communications independently of the destination addresses identifying the mobile units in the data communications packets[see paragraph 0066 lines 1-6 where the Access Points receive PPP down link frames and forward them to the end system (mobile unit)].

However, Feder does not explicitly teach generating, at the access points, polling signals; monitoring, at the mobile units, the polling signals. However, Vook teaches a destination device (mobile units) monitors all broadcast beacons (polling signals), that are generated by an Access Point, in order to receive all broadcast packets [See column 17 lines 29-32

and column 18 lines 25-29]. It would have been obvious for a person having ordinary skill in the art to enable Feder's end system (mobile units) in order to allow them receive all the broadcast packets disclosed in Feder.

Regarding claim 9, Feder teaches a method as specified in claim 8 wherein said access points are arranged to not relay a selected type of data communications received from said switching hub [see paragraph 0080 lines 6-9 where an access point will only perform MAC layer bridging on behalf of end systems whose MAC addresses are present in the table].

Regarding claim 10, Feder teaches a method as specified in claim 8 further including the steps of: providing data communications packets from one of said mobile units by radio communications to an associated access point, said packets including a destination address and a source address corresponding to said mobile unit [see paragraph 0078 lines 1-7 where air links from end system (mobile units) are used to connect to an MSC (central computer) via at least one base station (access points) and a wireless hub and one backhaul network. See also table-4 in paragraph 0320 where the transmitted Ethernet frame includes MAC user end system (mobile unit) as Destination Address and/or a source address];

relaying data communications packets received by said access points from said mobile units to a port of said switching hub [see paragraph 0326 lines 1-4 where the AP relays

the message to its wireless hub. See also paragraph 0080 where the Access Point is simply a port]; and

operating said switching hub to relay said data communications packets received from said access points to said wired data communications network or said other access points in accordance with said destination address **[see paragraph 0327 lines 8-9 where the messages are relayed form the AP to the wireless hub and to the registration server (central computer)]** and to update said routing list at said switching hub by relating said port of said switching hub to said source address of said data packet **[see paragraph 0329 lines 4-7 where the connection table at the wireless hub is updated based on the reply]**.

Regarding claim 11, Feder teaches a method as specified in claim 10, wherein said mobile units are further arranged to send a data communications message upon associated with an access point, said message causing said switching hub to update said routing list with the address of said mobile unit **[see paragraph 0329 lines 4-7 where the connection table at the wireless hub is updated based on the reply - see ‘tables 1 and 2’ – shown in paragraphs 0313-0315 where table 2 associates a list of access points AP1-AP2 and corresponding wireless modem id (address of said mobile unit)]**.

Regarding claim 12, Feder teaches a method as specified in claim 10 wherein said access points are arranged to send a data communications to said switching hub when a mobile unit becomes newly associated with said access point, said message having a source

address corresponding to said newly associated mobile unit and causing said switching hub to update said routing list with the address of said mobile unit [see **paragraph 0329 lines 4-7 where the connection table at the wireless hub is updated in order to associate a roaming end user to the new Access Point it tries to associate with – see also ‘tables 1 and 2’ – shown in paragraphs 0313-0315 where table 2 associates a list of access points AP1-AP2 and corresponding wireless modem id (address of said mobile unit)**].

Regarding claim 25, Feder teaches the improvement of claim 1, wherein the switching hub is connected to the access points via a wired Ethernet connection [see **paragraph 0079**].

6. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Feder in view of Vook as applied to claims 1,2, 8-12, and 25 above, and further in view of Heiman et al. (US 6,859,134) (herein after Heiman).

Regarding claim 24, Feder teaches the improvement of claim 1 as discussed above. However, Feder does not teach the wireless communication standard protocol is an 802.11 protocol. However, Heiman in the same field of endeavor teaches a wireless system with a central computer (hub) connected to a plurality of access points conforming to the 802.11 protocol [see **column 4 lines 7-11**]. It would have been obvious for a person having ordinary skill in the art to adopt IEEE802.11 functionality in Feder's

system. A person having ordinary skill in the art would readily appreciate advantages of adopting 802.11 such as the ability for interoperability with devices that are built into the Wifi standard regardless of manufacturer/brand.

Response to Arguments

7. Applicant's arguments with respect to claims 1, 2 and 8-12 have been fully considered but are not persuasive.

Applicant alleges Feder does not disclose communication in accordance with a wireless communication protocol wherein said data switching hub provides the functionality of the wireless communication standard protocol that selectively sends data communications to access points connected to said hub (see applicant's remarks page 5). Examiner respectfully disagrees. As described in the office action regarding claim 1, the wireless hub disclosed in the Feder reference maintains a connection table that allows it to forward packets to a particular Access Point that is associated with the end system being served by said Access Point (see paragraph 0314 - table 2). In addition, Feder teaches the wireless hub includes a proxy registration agent acting as a proxy for the end user (mobile device) registration agent that acts as a foreign agent of the mobile IP [see paragraphs 0062, 0081, 0350]. The wireless hub also utilizes additional standards such as 802.3 mobile IP and XTunnel protocol [see paragraph 114] for the purpose of serving the mobile devices connected to the hub via the access points. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. Applicant's remarks do not specify why the

wireless hub disclosed in Feder with the above mentioned functions should not be considered a hub that facilitates communication in accordance with a "wireless communication standard protocol, wherein said data switching hub provides the functionality of the wireless communications standard protocol that selectively sends data communications to access points connected to said hub".

In addition, examiner respectfully disagrees with applicant's allegation that the Feder reference does not disclose that a data switching hub carries out the association of access points and mobile units. First, it should be noted that the wireless hub includes a registration agent as discussed above (see paragraph 0061). Therefore, the wireless hub is considered to 'carry out' the association of the end user with the Access Point. In the absence of an express intent to impart a novel meaning to the claim terms, the words are presumed to take on the ordinary and customary meanings attributed to them by those of ordinary skill in the art [MPEP 2111.01]. Therefore, the involvement of the agent within the wireless hub in the registration process is considered to be 'carrying out' of the process.

In addition, assuming arguendo, the wireless hub did not participate in the wireless "registration" process, the Feder reference would still teach the mobile hub "carries out the association of access points and mobile units" since it teaches the hub maintains a connection table that allows it to forward packets to a particular Access Point that is associated with the end system being served by said Access Point as discussed above (see paragraph 0314 - table 2). Since there is no expressed intent to impart a novel meaning to the claim term "associate", said term is presumed to take on the ordinary and customary meanings attributed to them by those of ordinary skill in the art.

Conclusion

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SORI A. AGA whose telephone number is (571)270-1868. The examiner can normally be reached on M-F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R. Sheikh can be reached on (571)272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. A. A./

Examiner, Art Unit 2476

/Ayaz R. Sheikh/

Supervisory Patent Examiner, Art Unit 2476